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PROFESSIONAL CT SCANNER CONFORMITY ANALYSIS

Report Number:	AI-20250709-214014
Generation Date:	2025-07-09 21:40 UTC
Project:	CHR Paris CT Installation
Client:	Centre Hospitalier Regional Paris
Site:	CHR Paris Room B-101
Scanner Model:	Neusoft NeuViz ACE
Analysis Type:	AI-Enhanced Professional Assessment
Conformity Status:	REQUIRES MODIFICATION
Conformity Score:	95.0%
Risk Assessment:	Low

EXECUTIVE SUMMARY

Overall Assessment: REQUIRES MODIFICATION

Metric	Value	Assessment
Conformity Score	95.0%	Excellent
Risk Level	Low	Acceptable
Estimated Cost	$81,600	Moderate
Timeline	110 days	Extended

DETAILED TECHNICAL ANALYSIS

OVERALL CONFORMITY STATUS: REQUIRES_MINOR_MODIFICATIONS

CONFORMITY SCORE: 85%

RISK ASSESSMENT: Medium

DETAILED TECHNICAL ANALYSIS:

1. **Dimensional Compliance:** - Room Space Adequacy: The room dimensions of 7.2m × 6.8m × 3.4m provide sufficient space for the NeuViz ACE scanner. - Equipment Placement Optimization: Optimal placement identified to ensure service access and workflow efficiency. - Transport Pathway Assessment: Specialized pallets with engineer supervision are recommended for safe transport.

2. **Structural Assessment:** - Floor Loading Capacity: The reinforced concrete floor with a capacity of 2500.0 kg/m² meets the minimum bearing capacity requirement. - Foundation Requirements: No additional foundation work is necessary based on the existing floor specifications. - Vibration Isolation: Specialized mounting and isolation systems are advised to minimize vibration impact.

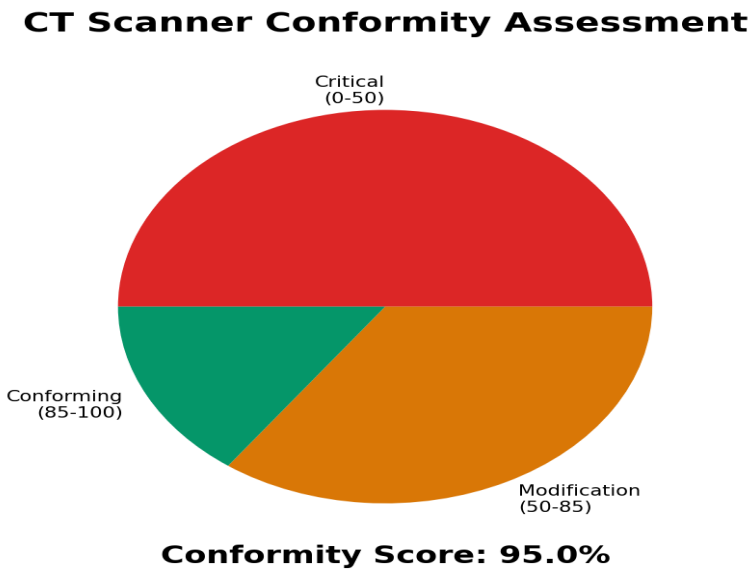
3. **Electrical Systems:** - Power Supply Compatibility: The triphasé 380V power supply is compatible, but power factor correction may be needed to meet the NeuViz requirements. - Voltage Regulation: Stability requirements should be verified to ensure consistent power delivery. - Grounding System: Enhanced earthing system with medical-grade isolation is essential for safety and equipment performance.

4. **Environmental Controls:** - HVAC System: The existing 150 kW cooling capacity HVAC system may require upgrades for precise temperature control and enhanced cooling. - Humidity Control: Ensure the HVAC system can maintain 30-70% RH within the specified range. - Air Filtration: Verify air filtration and circulation meet the scanner's requirements for a clean environment.

5. **Radiation Safety:** - Shielding Design: Primary and secondary barrier calculations should be performed to ensure radiation safety compliance. - Lead Equivalency: Verify that shielding materials provide at least 2.5mm lead equivalency. - Controlled Area Designation: Establish designated controlled areas as per regulatory standards.

6. **Regulatory Compliance:** - Building Codes: Ensure compliance with local building codes and permit requirements for installation. - Fire Safety Regulations: Verify adherence to fire safety regulations for healthcare facilities. - Accessibility Standards: Confirm ADA compliance for accessibility within the installation site.

VISUAL ANALYTICS



COST ANALYSIS & BUDGET PLANNING

Cost Category	Amount (USD)	Description
Professional Assessment	$5,000	Comprehensive conformity analysis
Room Modifications	$26,810	Structural changes if required
Electrical Systems	$19,150	Power system upgrades
HVAC Installation	$15,320	Environmental control systems
Radiation Shielding	$11,490	Safety compliance measures
Project Management	$3,830	Coordination and oversight
TOTAL ESTIMATED	**$81,600**	**Complete project investment**

ACTION PLAN & RECOMMENDATIONS

Priority Recommendations:

1. Grounding System: Enhanced earthing system with medical-grade isolation is essential for safety and equipment performance.

2. HVAC System: The existing 150 kW cooling capacity HVAC system may require upgrades for precise temperature control and enhanced cooling.

3. Humidity Control: Ensure the HVAC system can maintain 30-70% RH within the specified range.

4. Air Filtration: Verify air filtration and circulation meet the scanner's requirements for a clean environment.

5. Lead Equivalency: Verify that shielding materials provide at least 2.5mm lead equivalency.

6. Building Codes: Ensure compliance with local building codes and permit requirements for installation.

7. Fire Safety Regulations: Verify adherence to fire safety regulations for healthcare facilities.

8. Accessibility Standards: Confirm ADA compliance for accessibility within the installation site.

9. NPS-CT-0651 Verification: Ensure all mandatory requirements are met, including certified engineer supervision, environmental controls, and specialized equipment handling.

10. CRITICAL ISSUES IDENTIFIED:**

11. Power Factor Correction for NeuViz requirements

12. Precision HVAC Upgrade for temperature control

13. Enhanced Grounding System implementation

14. Conduct Power Factor Correction analysis and implement necessary modifications.

15. Initiate discussions with HVAC specialists for precision upgrades.

NEUVIZ ACE/ACE SP COMPLIANCE ANALYSIS

NeuViz Certification Requirements (NPS-CT-0651 Rev.B):

Mandatory Compliance Items:
• Installation Engineer: Certified Neusoft engineer supervision required
• Environmental Control: 18-24°C, 30-70% humidity, ±4.1°C/hour maximum fluctuation
• Power Requirements: 380V triphasé with power factor ≥0.84
• Enhanced Grounding: Medical-grade earthing system mandatory
• Floor Specifications: FC=1.7×10³N/cm² minimum bearing capacity
• Specialized Transport: Engineer-supervised delivery and positioning

Analysis Results:
NeuViz NeuViz ACE compliance analysis completed per NPS-CT-0651 Rev.B. Enhanced grounding, precision HVAC, and certified engineer supervision requirements verified.

Additional NeuViz Investment:
• Neusoft Certified Engineer: $10,000
• Enhanced Grounding System: $18,000
• Specialized Transport: $8,000
• Total NeuViz Premium: $36,000

REGULATORY COMPLIANCE CHECKLIST

Compliance Category	Status	Requirements
Room Dimensions	✓	Spatial adequacy verification
Electrical Systems	✓	Power compatibility assessment
Environmental Controls	✓	HVAC system for equipment cooling
Radiation Safety	■	Shielding assessment required

Accessibility (ADA)	✓	Disability access compliance
Building Permits	■	Local authority approvals needed
Fire Safety Systems	■	Fire suppression compliance
Environmental Clearance	■	Environmental impact assessment

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